

EGREMONT FLOOD RISK MANAGEMENT SCHEME



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INTRODUCTION

The Orgill area of Egremont has a long standing flood history and currently remains at flood risk. Flooding has affected properties in this location in 1975, 1987, 1995, 1999, 2006 and most recently in 2012 when 45 properties were flooded. Skirting and Whangs Beck are two; small, mainly culverted watercourses that have inadequate capacity and are prone to blockages contributing to the surface water flood risk.

This booklet will outline the proposed preferred option for Skirting and Whangs Beck Flood Risk Management Scheme. It will explain all aspects of the scheme in detail. It will also provide information of what to do and who to contact in the event of a flood.

Overview

The Flood Risk Management Scheme will provide better flood protection and resilience to 220 residential and commercial properties through a combination of Upstream Storage, flood walls, embankments and Sustainable Urban Drainage Systems (SuDs). We propose to construct four flood storage areas to store floodwater reducing the risk of flooding to properties downstream of both Skirting and Whangs Beck. Predominately earth embankments will be constructed to create the flood storage areas with an earth embankment tying into a flood wall along the boundary of the Falcon Club grounds. A number of sustainable urban drainage systems will be delivered across Orgill to manage surface water flows away from properties.

We will deliver a maintenance programme to keep the scheme working to its best potential and through partnership working we have been able to create opportunities that will enhance both the local environment and community amenities.

What Has Been Done So Far?

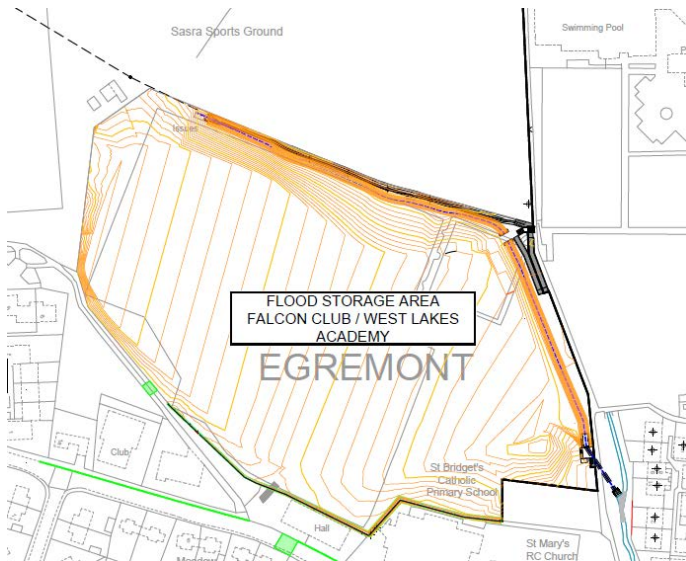
Since 2012 the Environment Agency, Copeland Borough Council and Cumbria County Council have been working together to better understand the flood risk from Skirting and Whangs Beck and to deliver an integrated flood risk management scheme that will better manage both flooding from the beck and surface water flooding. Working with our partners we have already installed some short term flood routing measures to divert water away from properties to areas that can be flooded without risk to properties and businesses alike. To help us monitor, warn and inform local residents we have also installed a rain gauge in the upstream catchment and river level telemetry at key sites on Skirting and Whangs Beck which provides a local flood warning service, warning residents of possible and imminent flooding. This work has proved to be successful on several occasions for smaller flood events, however we still need to provide a more robust long term scheme to reduce the risk of flooding to the Orgill Estate.

Key Aims:

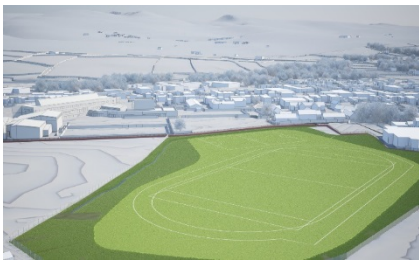
Our key aims for the future flood risk management scheme are to:

- ❖ Reduce flood risk from Skirting and Whangs Beck to a 1% chance of flooding in any one year also taking into consideration the impacts of climate change
- ❖ Provide increased protection to 44 properties through Property Flood Resilience measures
- ❖ Daylight sections of culverted watercourse to reduce blockages, improve maintenance and enhance the natural environment
- ❖ Work in partnership to manage surface water better through Sustainable Urban Drainage Systems (SuDs)
- ❖ Improve and enhance the environment for habitat and the local community

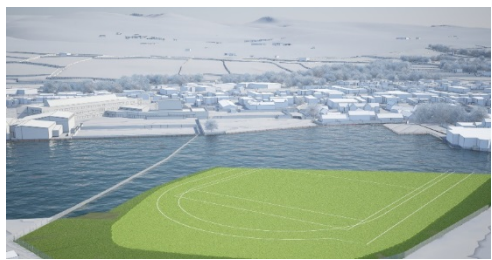
Falcon / West Lakes Academy -



The storage area at Falcon / West Lakes Academy will have a maximum storage volume of 31,150m³ which is equivalent to over 12 Olympic swimming pools. It will also include 550 linear meter flood bunds ranging in height from 0.5m to 1.5m.

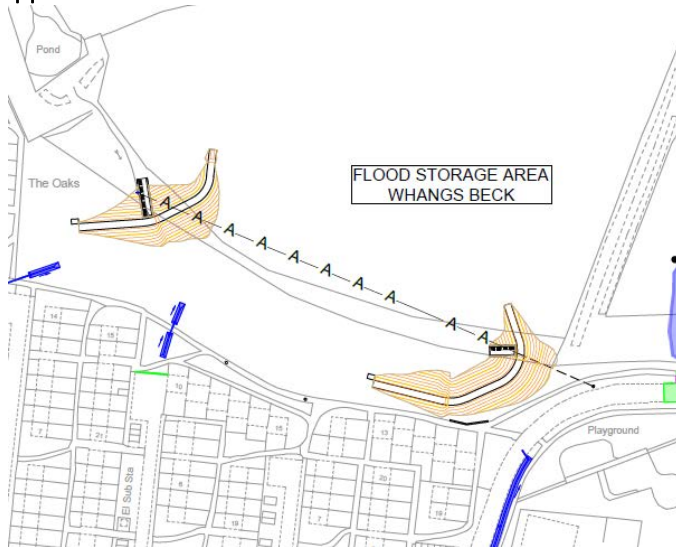


(Falcon Club / West lakes academy
storage basin in normal conditions)



(Falcon Club / West Lakes Academy
storage basin in high conditions)

Whangs Beck upper and lower –



There will be two storage areas at Whangs Beck. Whangs Beck Upper storage area will have a maximum volume of 6400m³ which is the equivalent of 2 and a half Olympic swimming pools. It will also include 70 linear meter flood bund ranging in height from 1.25m to 4.5m. Whangs Beck Lower storage area will have a maximum volume of 4900m³ which is equivalent to just under 2 Olympic swimming pools. It will also have 90 linear meters of flood bund, ranging in height from 0.3m to 4.9m.



(Whangs Beck upper and lower
in normal conditions)



(Whangs Beck upper and lower
during high flows)

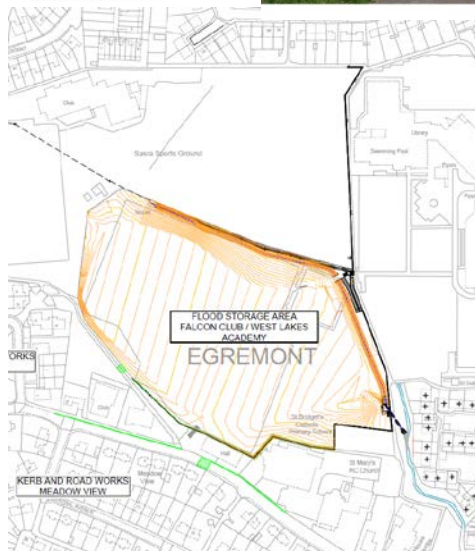
Linear Defences (flood walls and embankments) –

There will be a section of earth embankment constructed to a maximum height of 1.5m along part of the boundary of the Falcon Sports Club ground that will run into a flood wall ranging in height from 0.5m to 1.5m which will continue around St Bridget's Catholic Primary School, tying into high ground. The wall will be constructed out of reinforced concrete and fenced for additional security.

Before construction



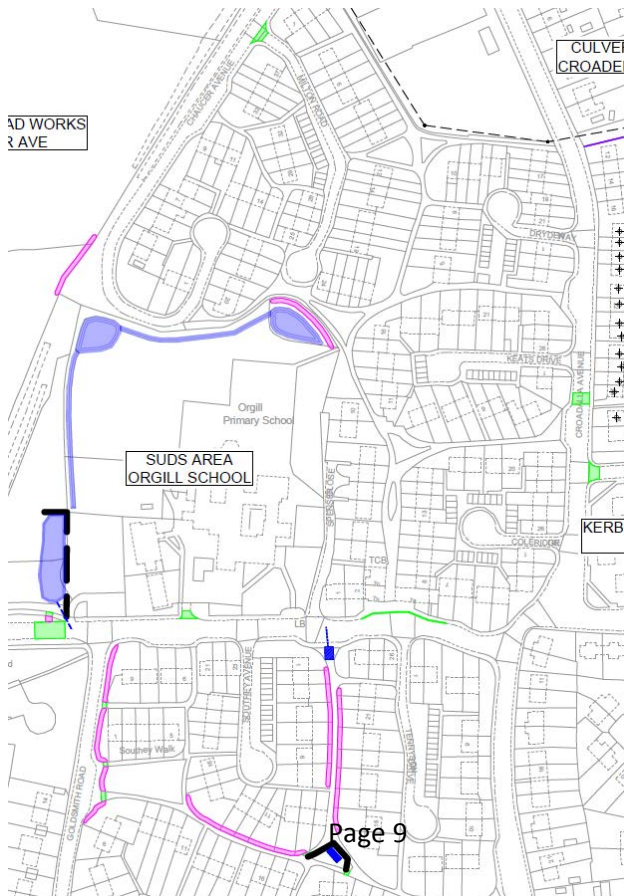
After construction



Sustainable Urban Drainage System (SuDs)

A number of these systems will be delivered across Orgill to manage surface water flows away from properties by:-

- ❖ Raising kerbs
- ❖ Installing of dwarf walls
- ❖ Installing of swales
- ❖ Installing of permeable paving
- ❖ Installing drainage ponds
- ❖ Ensuring surface water drains work to their design capacity
- ❖ Installation of Property Flood Resilience Measures to 44 properties





(Examples of Sustainable Urban Drainage Systems)



These systems once implemented will manage overland flow more effectively, diverting flood water away from properties using raised kerbs, dwarf walls and swales into existing and new drainage areas combined with the addition of permeable paving areas to absorb water. These systems will be installed in a number of key locations across the Orgill area.

Property Flood Resilience Measures

Resilience measures can be an effective means of reducing the impact of flooding. Measures can be taken externally to prevent or reduce the amount of flooding entering property whilst internal measures can dramatically reduce the recovery time. Examples of external resilience measures include door barriers, flood doors, non-return valves and airbrick covers. These measures can be used stand alone or in conjunction with more formal flood risk management or Sustainable Urban Drainage Systems.



Improved Maintenance

We will deliver a maintenance programme that will:-

- ❖ Increase the capacity of open channels and improve channel conveyance in culverts
- ❖ Install new trash screens which will catch debris and reduce blockages
- ❖ Re-grade existing open sections of Skirting Beck to improve channel conveyance
- ❖ Ensure Whangs Beck is maintained in the future by the Environment Agency

ENVIRONMENTAL AND COMMUNITY ENHANCEMENTS

Through partnership working we have been able to create opportunities that will enhance both the local environment and community amenities. We aim to deliver:-

- ❖ Improved playing facilities at the Falcon Sports Club and West Lakes Academy including a full size football pitch.
- ❖ In Partnership with Forestry Commission tree planting at Orgill School creating habitats for wildlife and an educational woodland area
- ❖ An educational pond located in the How Bank area for use by the local schools and the community.
- ❖ In partnership with Environment Agency Fisheries Team and local Angling Club educational pond dipping days at Peterburg Farm, Beckermest.

ENVIRONMENTAL IMPACTS

Our aim is to not only reduce flood risk but to enhance the local environment and community amenities.

There will undoubtedly be some vegetation and tree clearance works which we need to undertake to carry out our works. We will keep all clearance works to a minimum but for every 1 tree we remove we will plant 5. We will offset the tree removal works with new planting of varying sizes and species of native trees in other areas.



This plan shows where trees will be saved and replanted, as well as some trees to be removed (Red)

PARTNERSHIP WORKING

We are working with several partners in order to deliver this Flood Risk Management Scheme for the Orgill community. Without their help and support this scheme would not have been able to go ahead. We would like to take this opportunity to thank them for their continued involvement in the scheme.

Our Partners for this scheme are:

- ❖ Cumbria County Council
- ❖ United Utilities
- ❖ Copeland Borough Council & Community Fund
- ❖ Castles and Coast
- ❖ Home Group
- ❖ Gleeson Homes
- ❖ The Falcon Club
- ❖ West Lakes Academy
- ❖ Sport England

Key Dates:

Egremont:

Late January 2019	Planning submission to Copeland Borough Council
February 2019	Tree clearance works
March 2019	Detailed design
Summer 2019	Construction start
Summer 2020	Scheme complete

Flood Resilience – Be prepared

Flooding is natural and can happen suddenly, so you need to be ready in case you are affected.

The Egremont flood risk management scheme will reduce the risk of flooding, but it is not possible to remove the risk entirely. Climate change has the potential to increase the probability and impact of flooding.

Flooding is complex and can occur from various sources, however the Environment Agency only has responsibilities in relation to flooding from main rivers and the sea.

Be prepared

To find out if you are at risk of flooding, and for more information on how to prepare and protect your home visit www.environment-agency.gov.uk or ring Floodline on 0345 988 1188

To find out if you can register to receive free flood warnings direct to your telephone contact Floodline on 0345 988 1188.

Consider creating a personal flood plan, and undertake actions to protect your property

Investigate the potential of installing property level resistance measures to your home, or making your property more resilient inside

Contact us

If you would like to contact staff at the Environment Agency to discuss any of the information shared today, you can send us a message at

SkirtingFRMS@environment-agency.gov.uk

Floodline

0345 988 1188 (24 hr
service)

Or type talk 0345 602 6340

www.gov.uk/floodsdestroy

DO YOU KNOW WHAT TO DO?

**FLOODS
DESTROY
DESTROY
BE PREPARED**